

FIG. 1

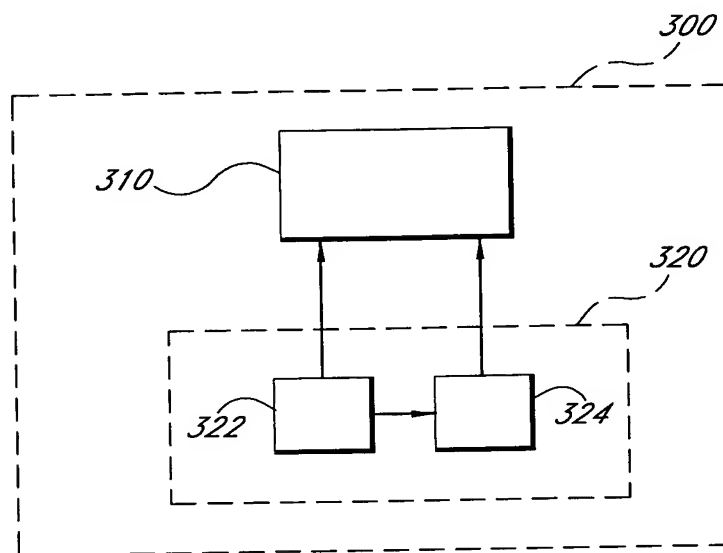


FIG. 2

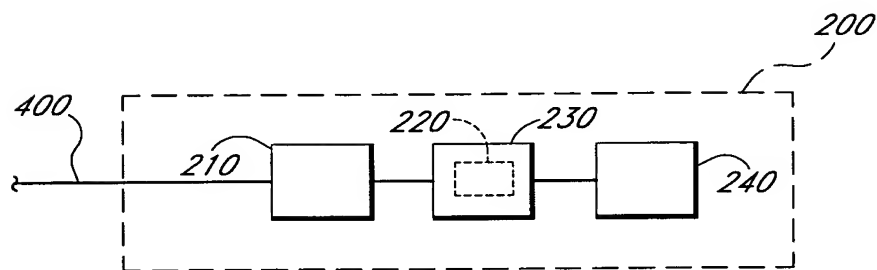


FIG. 3A

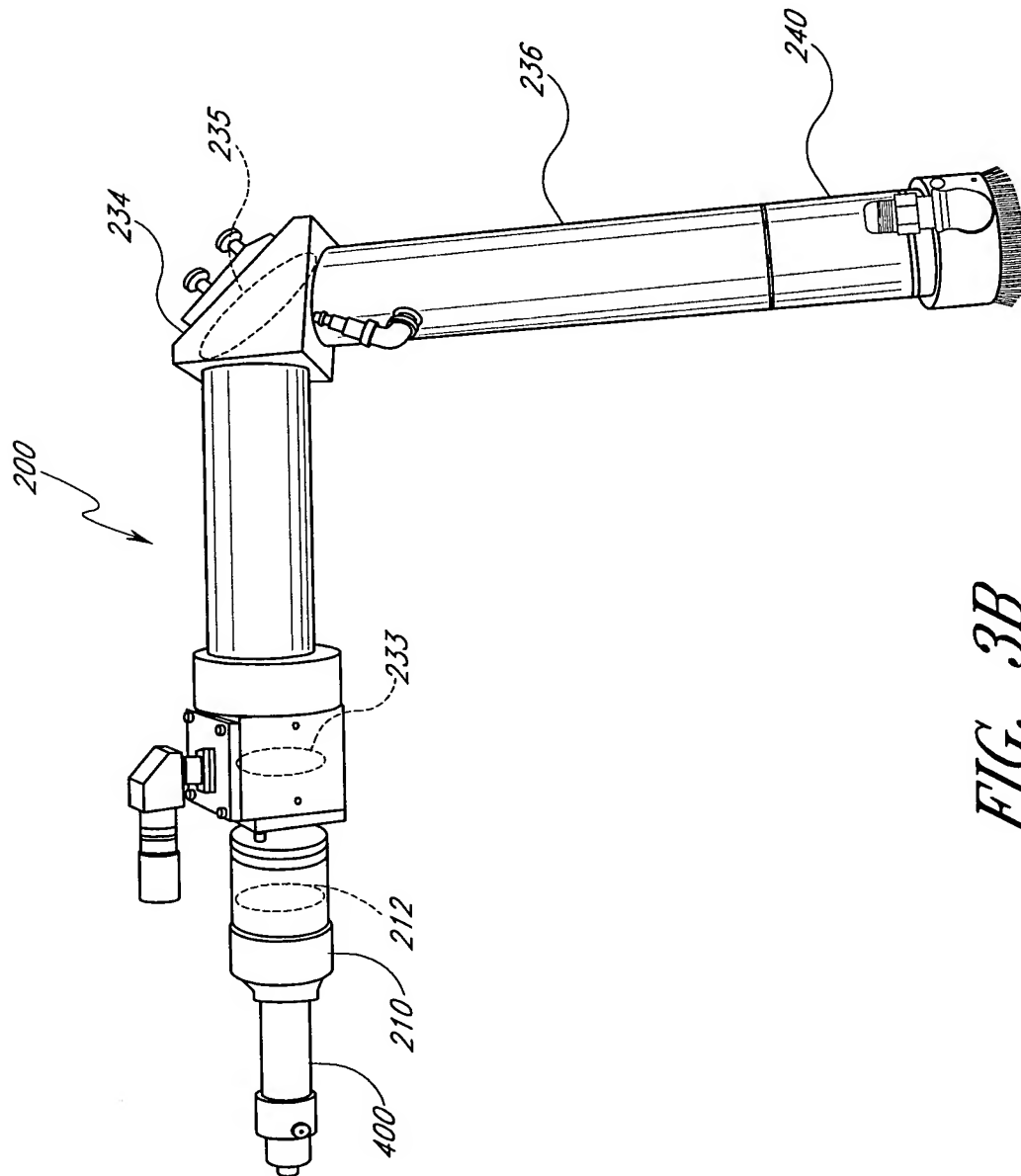


FIG. 3B

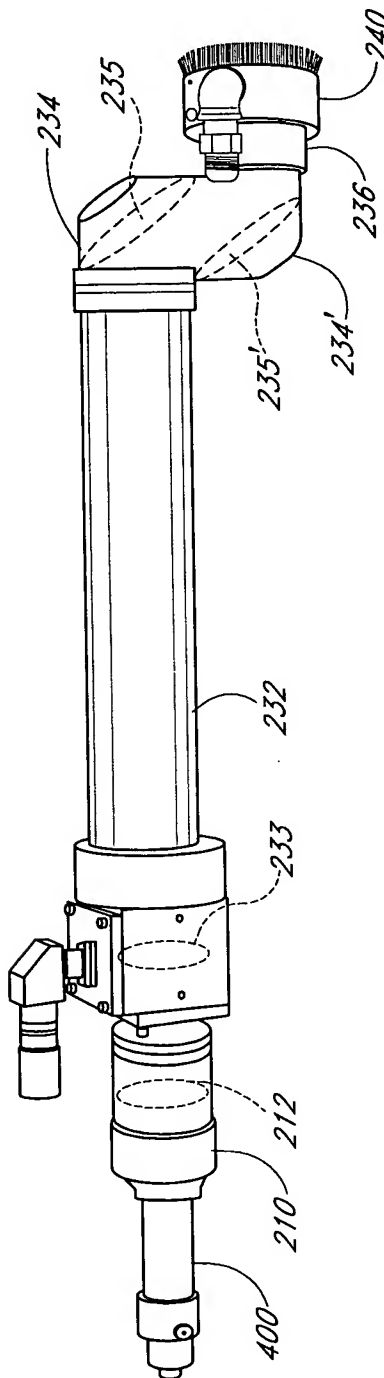


FIG. 3C

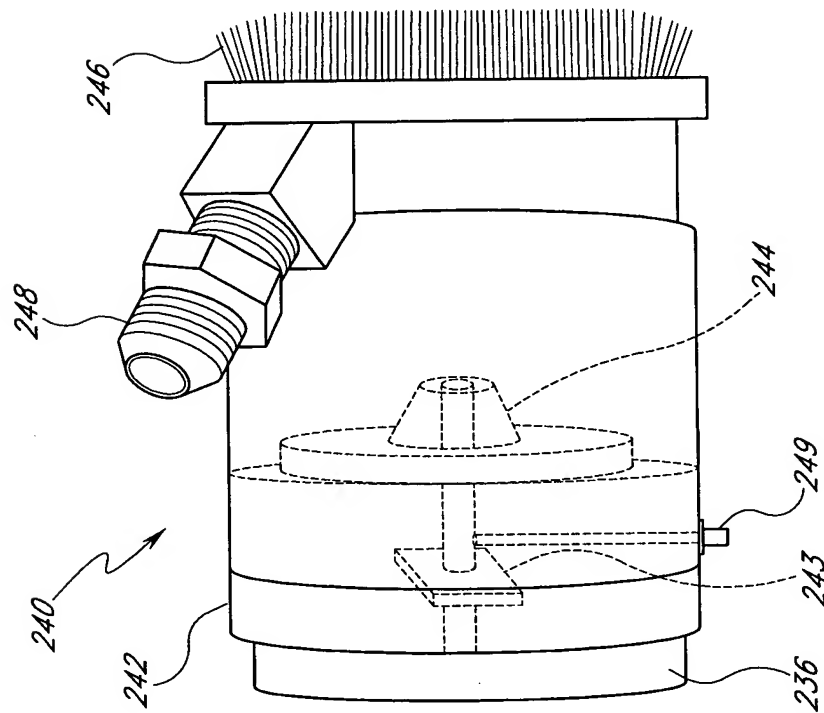


FIG. 4

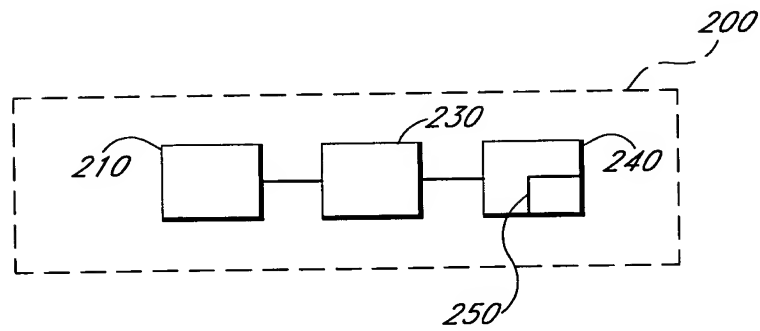


FIG. 5

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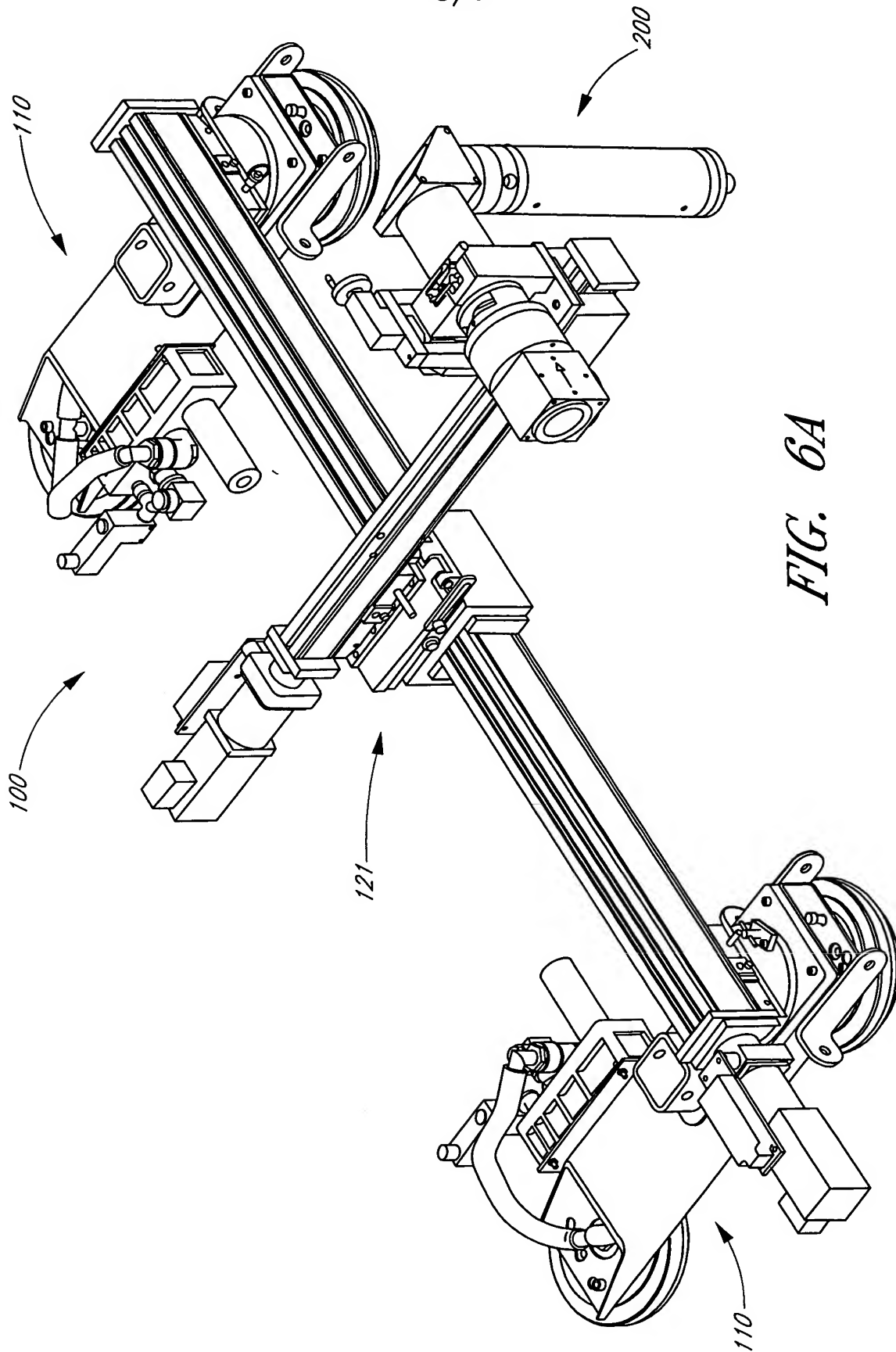
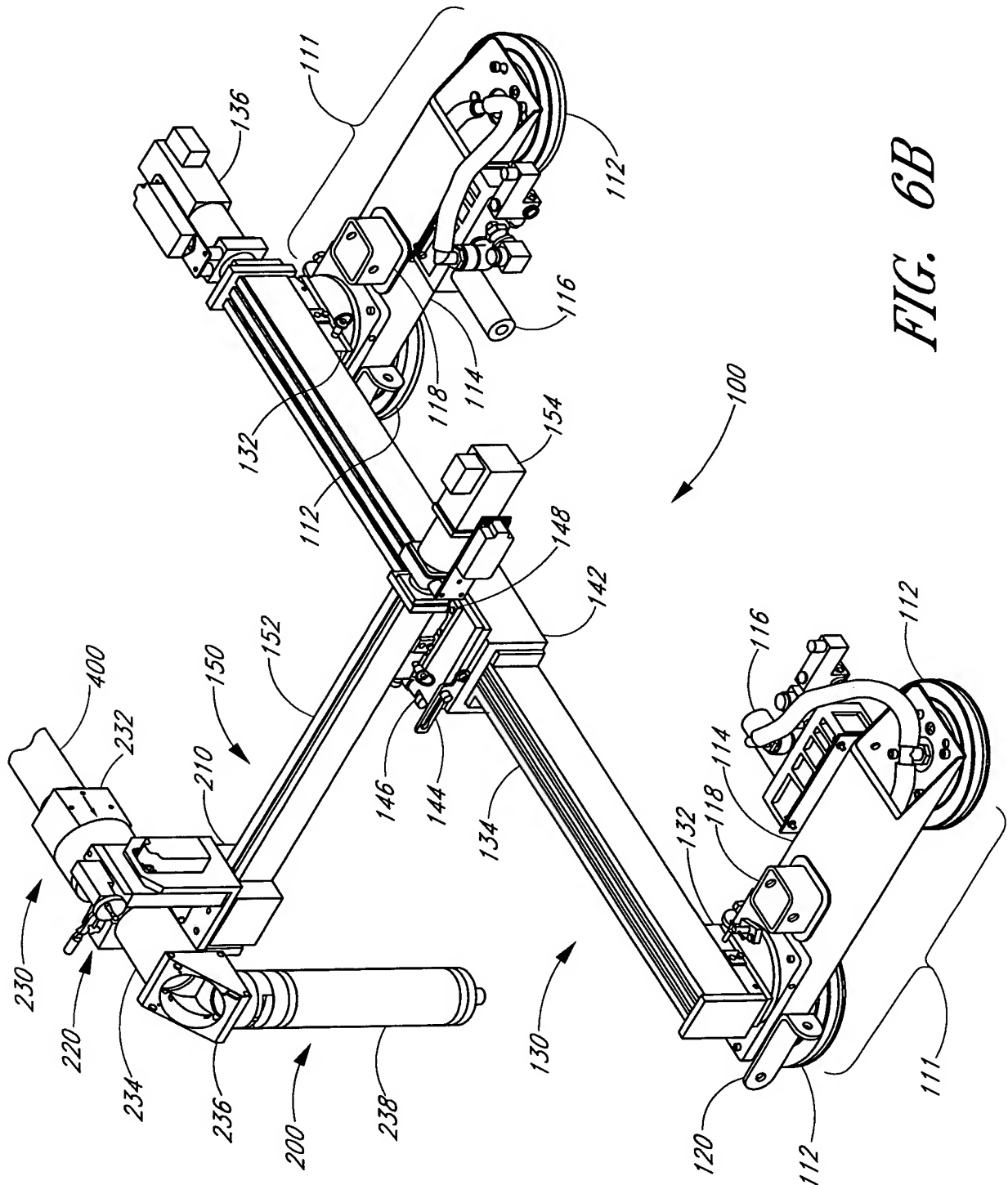


FIG. 6A

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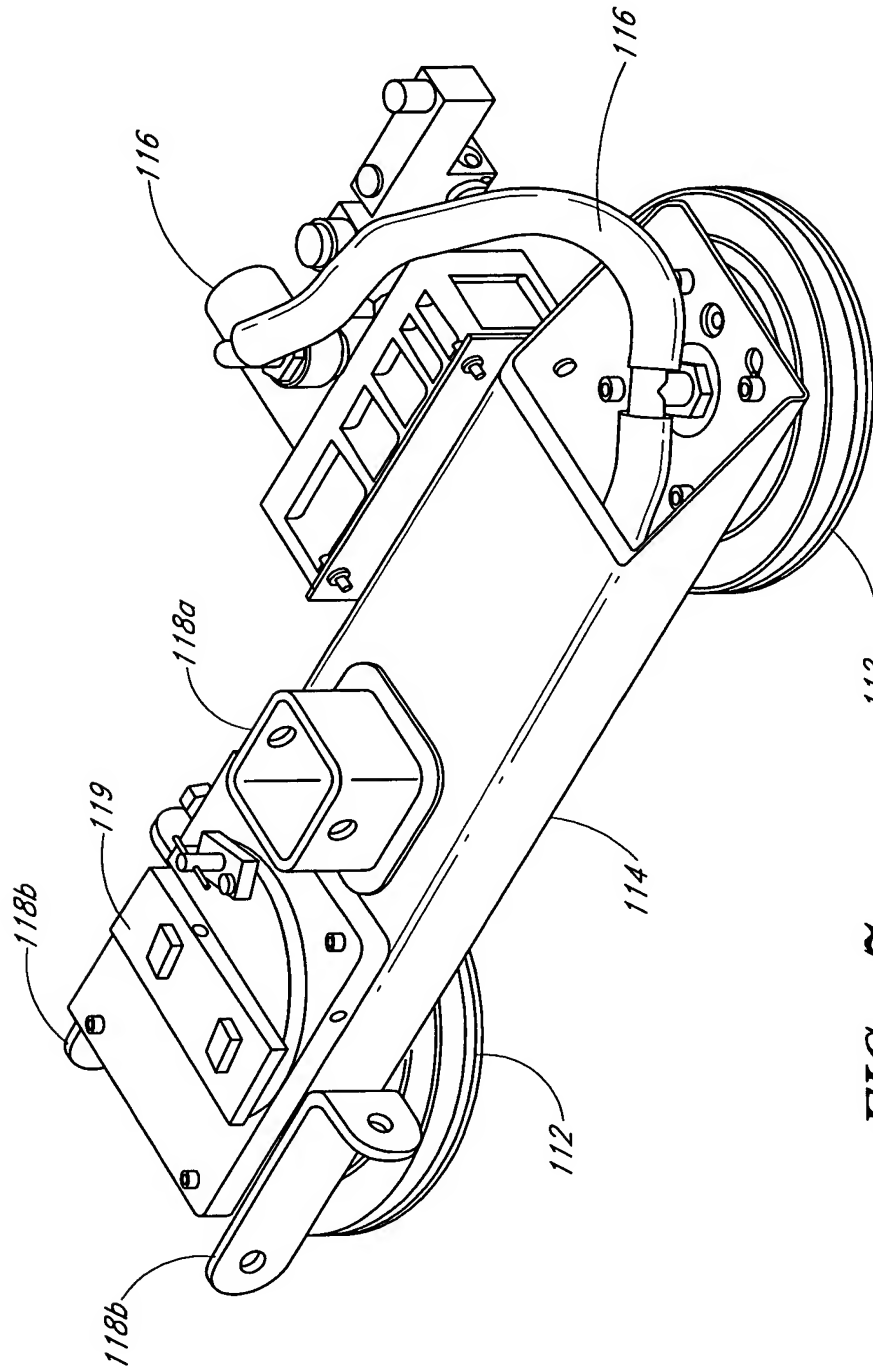
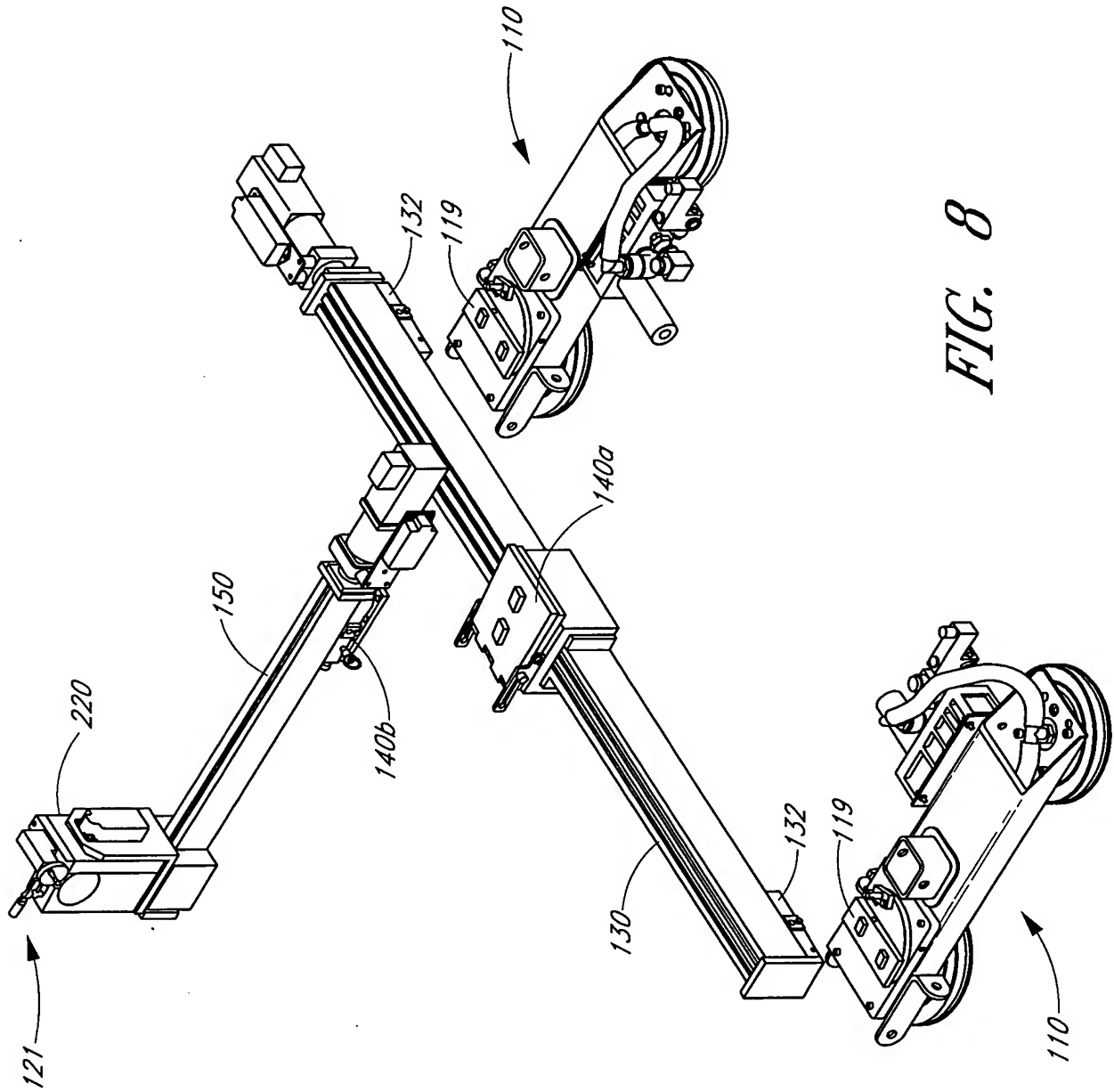


FIG. 7



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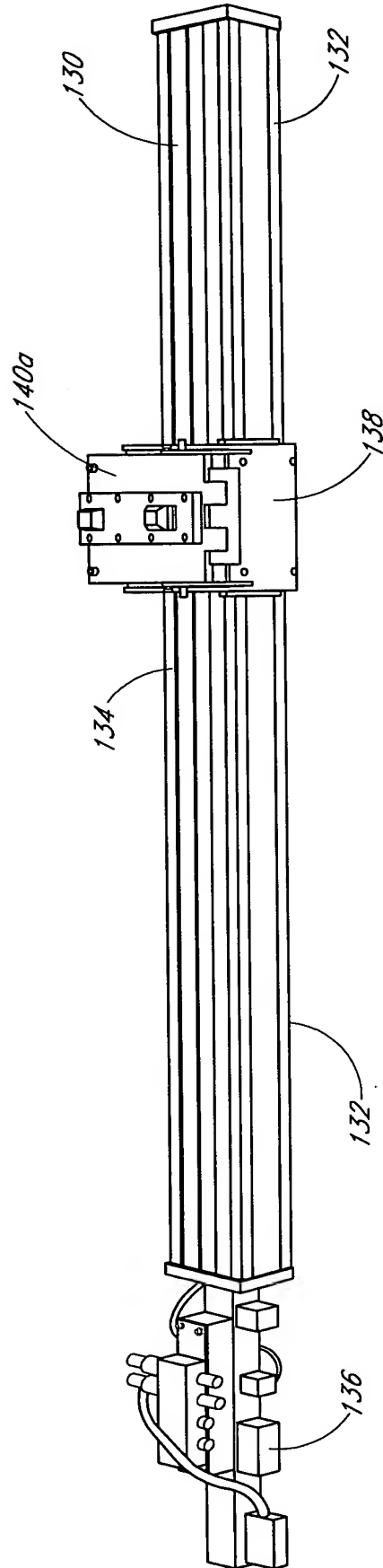


FIG. 9

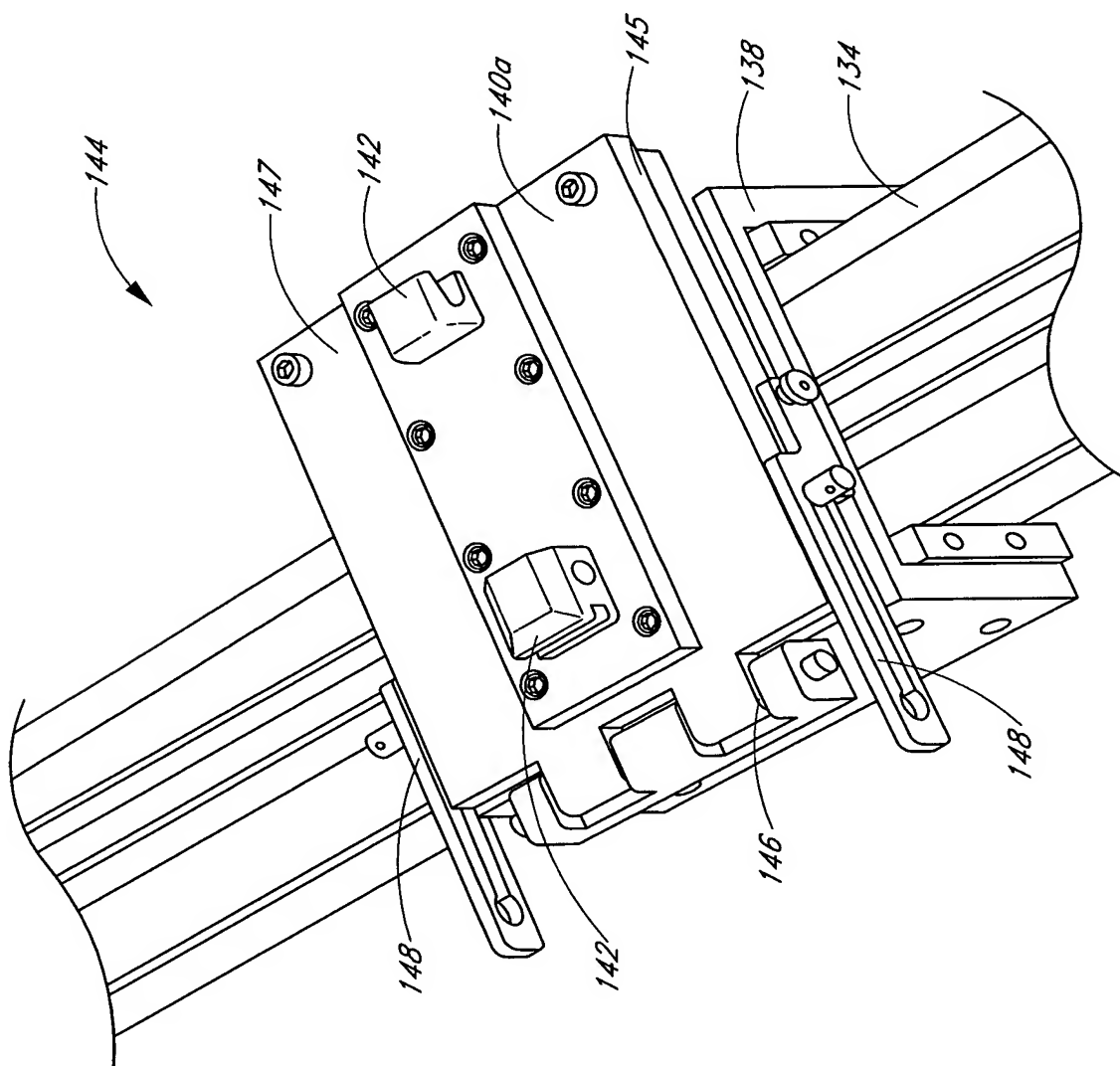


FIG. 11A

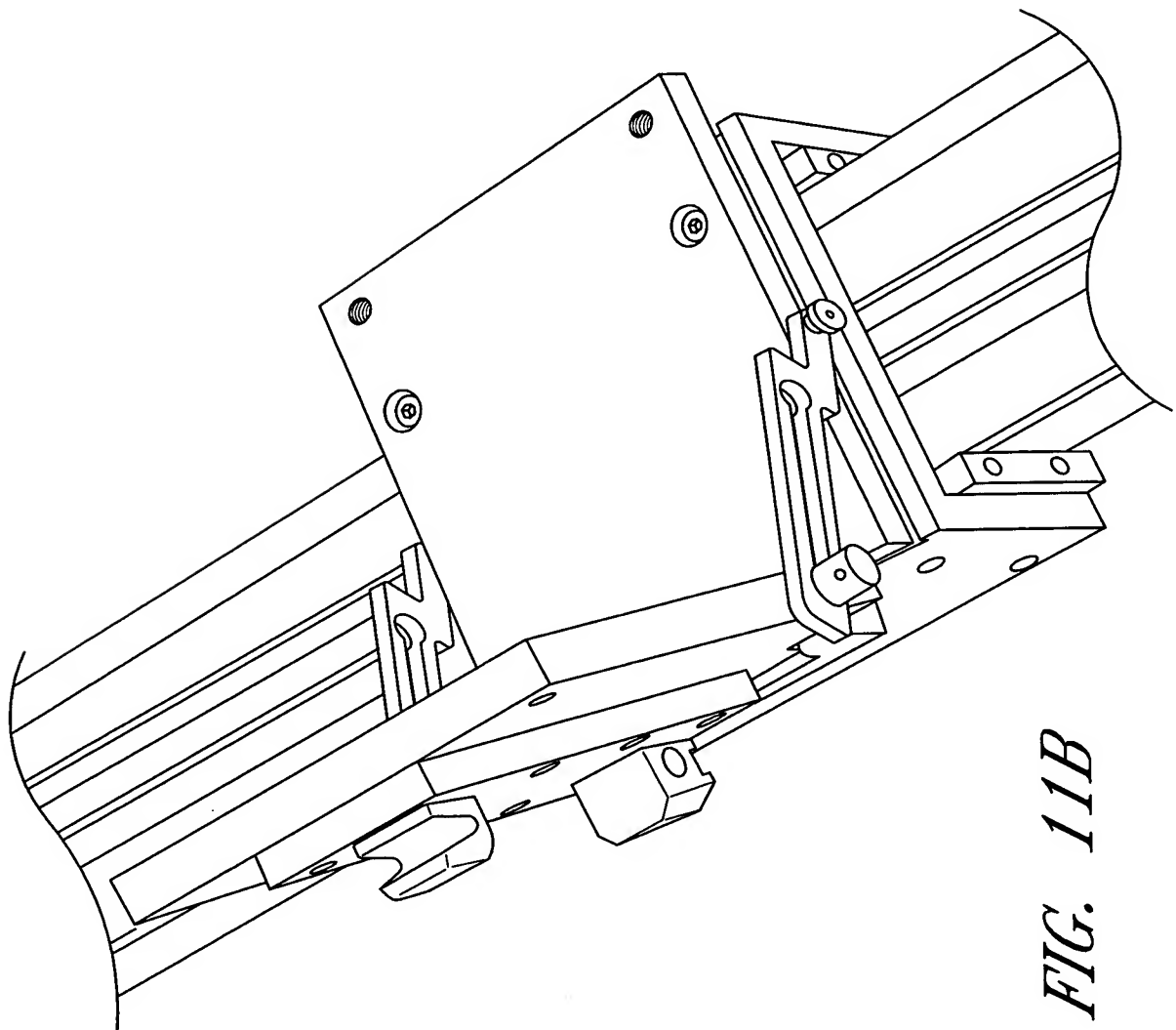


FIG. 11B

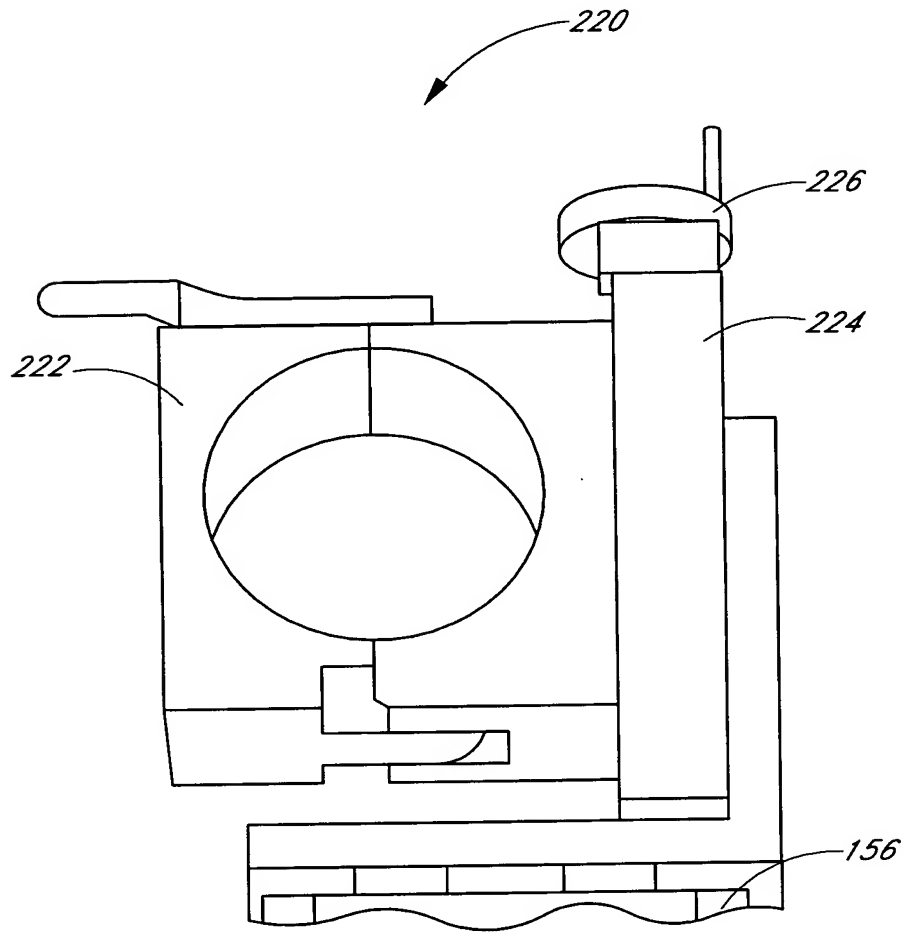


FIG. 12

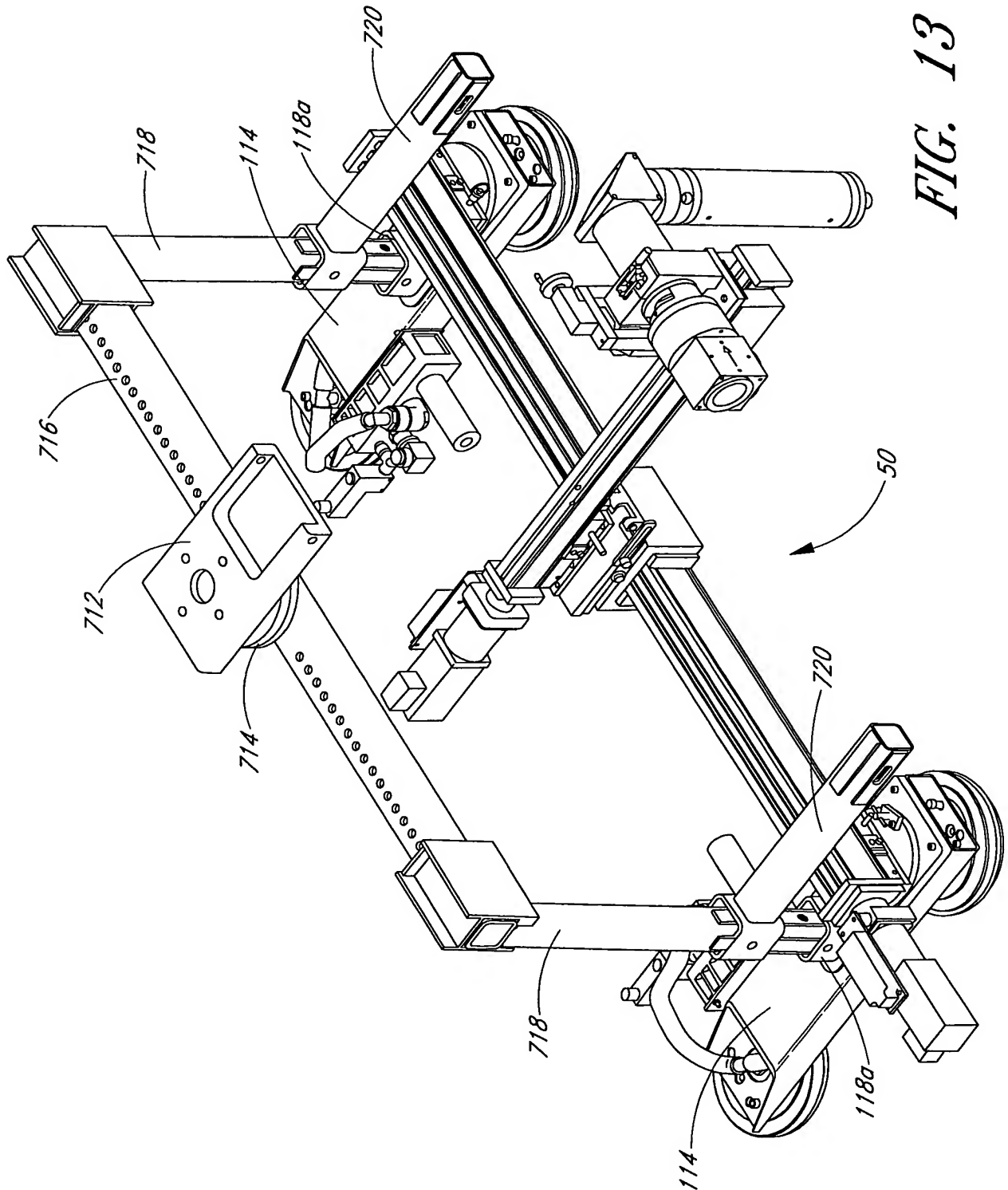


FIG. 13

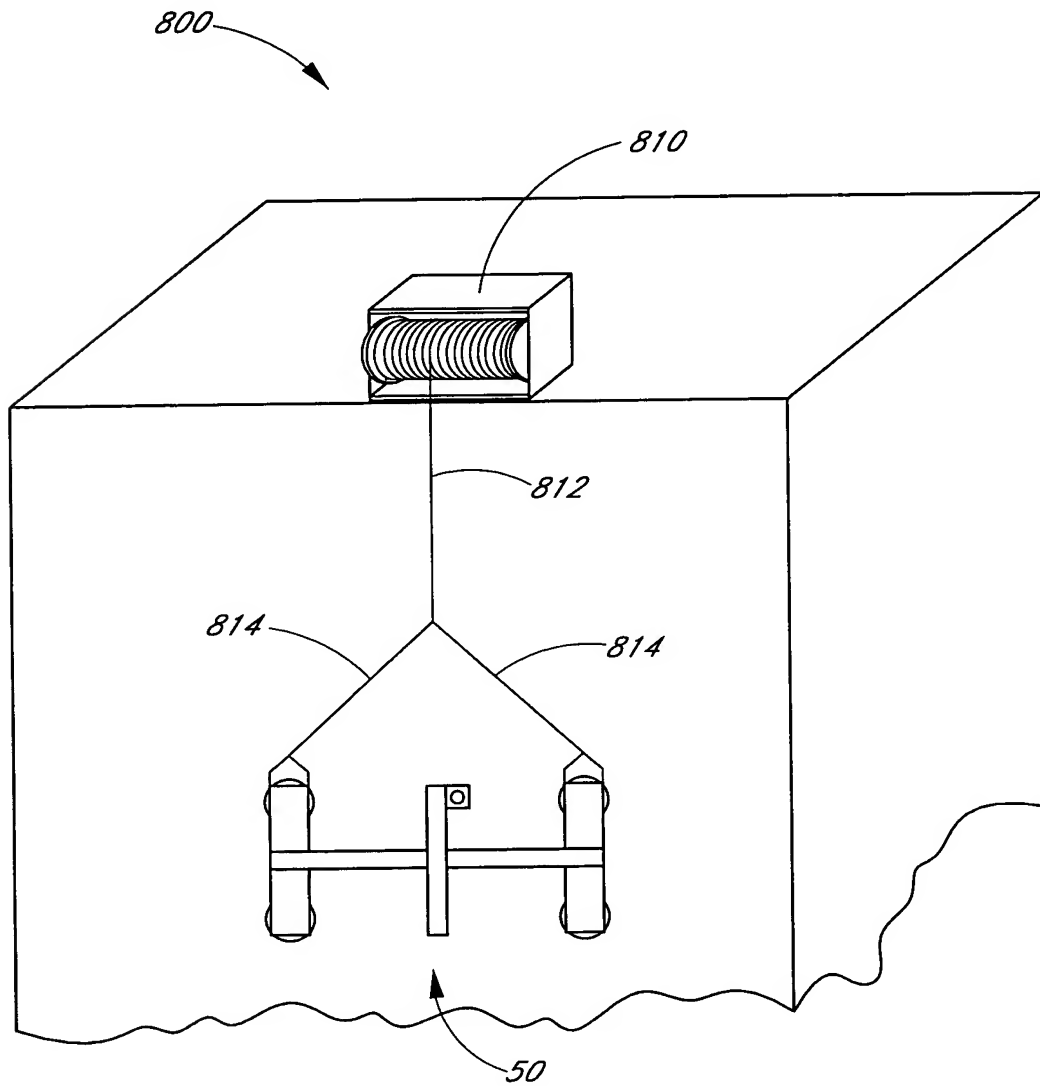
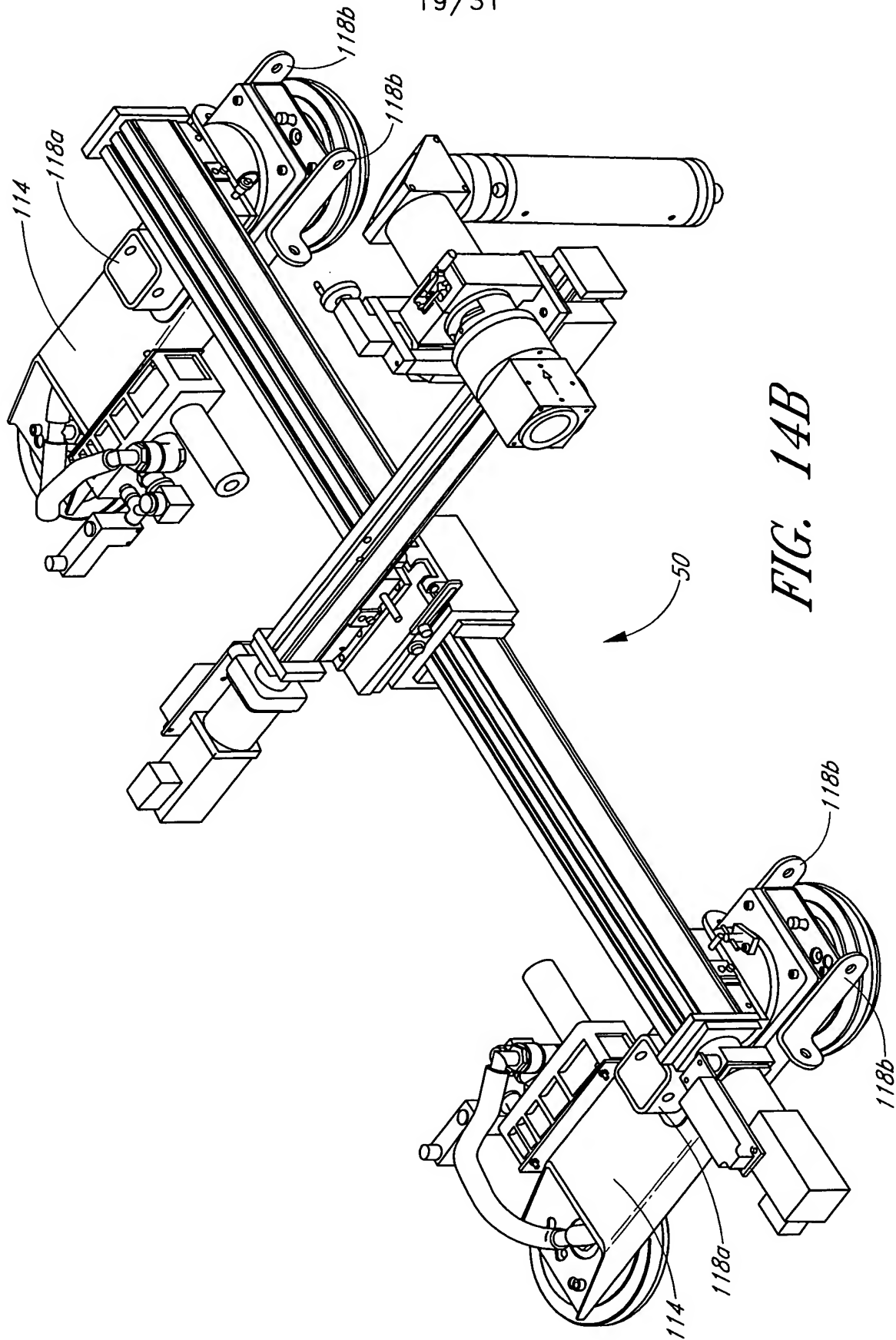


FIG. 14A



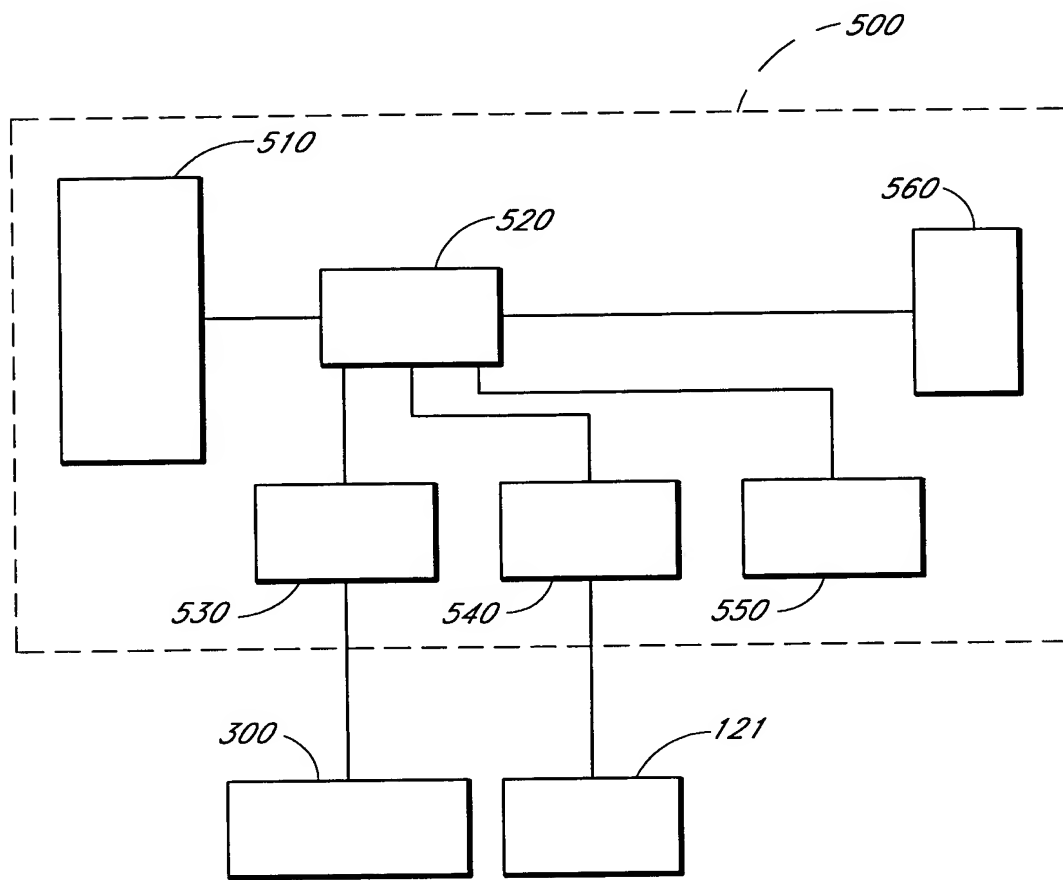


FIG. 15

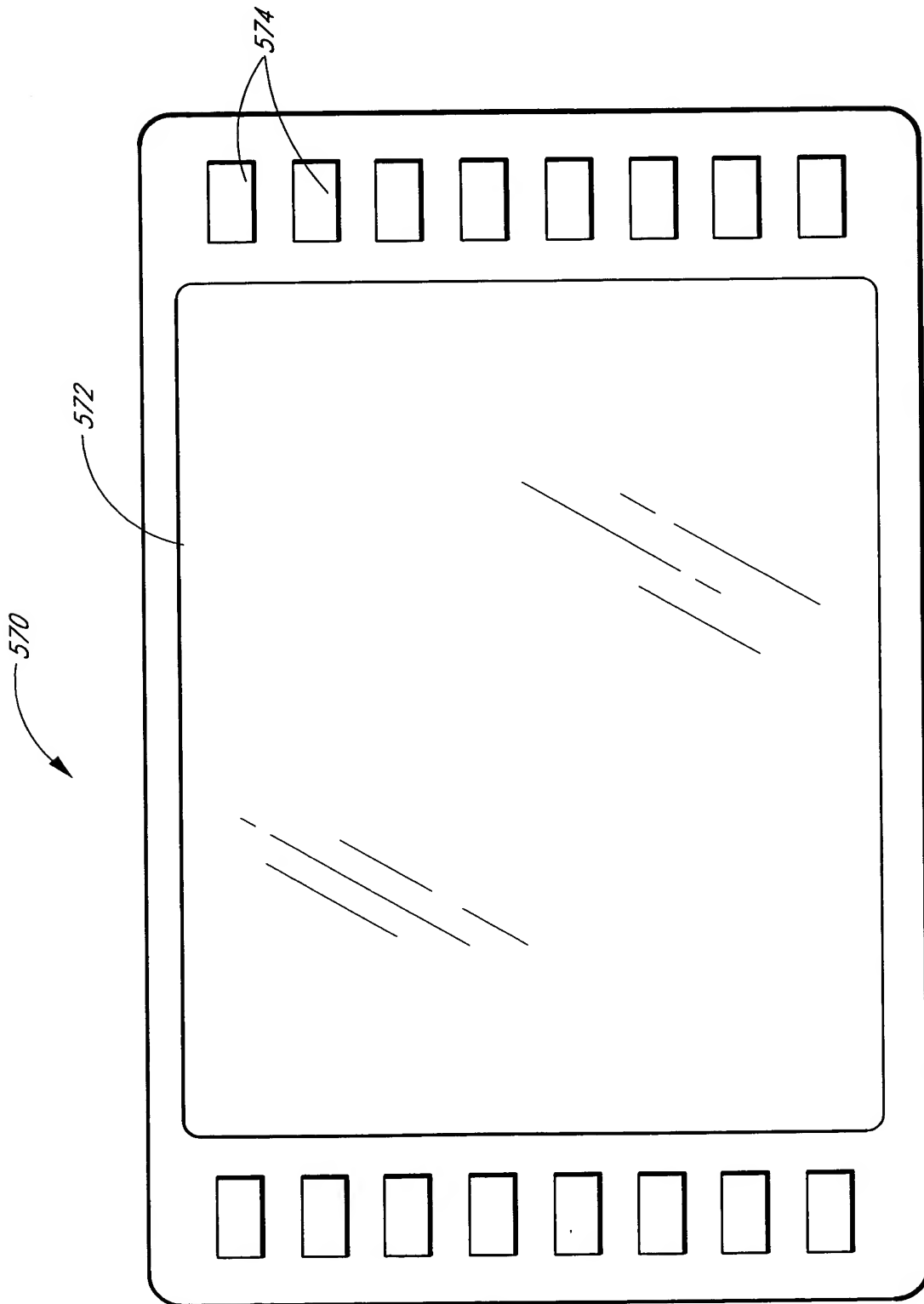


FIG. 16

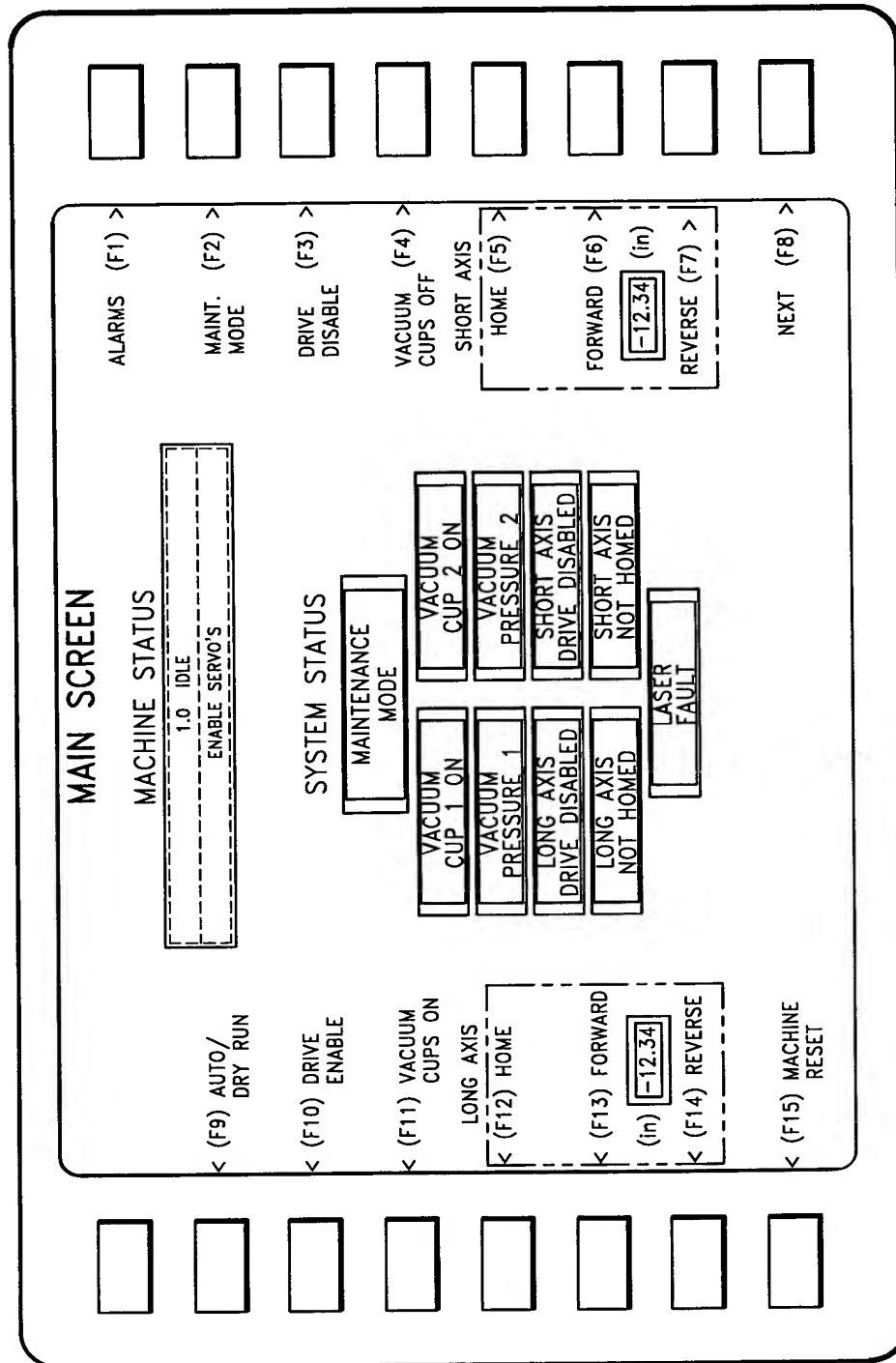


FIG. 17A

SELECT OPERATION SCREEN

MACHINE STATUS

1.0 IDLE

ENABLE SERVO'S

< (F9) AUTO/
DRY RUN

< (F11) CIRCLE

LONG AXIS
POSITION

-12.34 (in)

SYSTEM STATUS

MAINTENANCE
MODE

CIRCLE
IDLE

PIERCE
IDLE

STRAIGHT CUT
IDLE

SURFACE KEYING
IDLE

SHORT AXIS
POSITION

-12.34 (in)

< (F12) PIERCE

< (F13) STRAIGHT CUT

< (F14) SURFACE
KEYING

< (F15) MACHINE
RESET

NEXT (F8) >

FIG. 17B

CIRCLE SETUP/OPERATION SCREEN

MACHINE STATUS

1.0 IDLE
ENABLE SERVO'S

CIRCLE STATUS

2.0 CIRCLE SEQUENCE IDLE
PRESS CYCLE START TO BEGIN

SYSTEM STATUS

MAINTENANCE
MODE

LONG AXIS POSITION
[-12.34] (in)

SHORT AXIS POSITION
[-12.34] (in)

CIRCLE PARAMETERS

REVOLUTIONS		DIAMETER (in)		TIME (sec)		SPEED (in/min)	
STATUS	1234	STATUS	-1.234	STATUS	1234	STATUS	-12.34
SET POINT	1234	SET POINT	-1.234	SET POINT	1234	SET POINT	-12.34
COUNT	123						

< (F9) AUTO/
DRY RUN

< (F11) CYCLE
START

< (F15) MACHINE
RESET

CYCLE (F4)
STOP

NEXT (F8) >

FIG. 17C

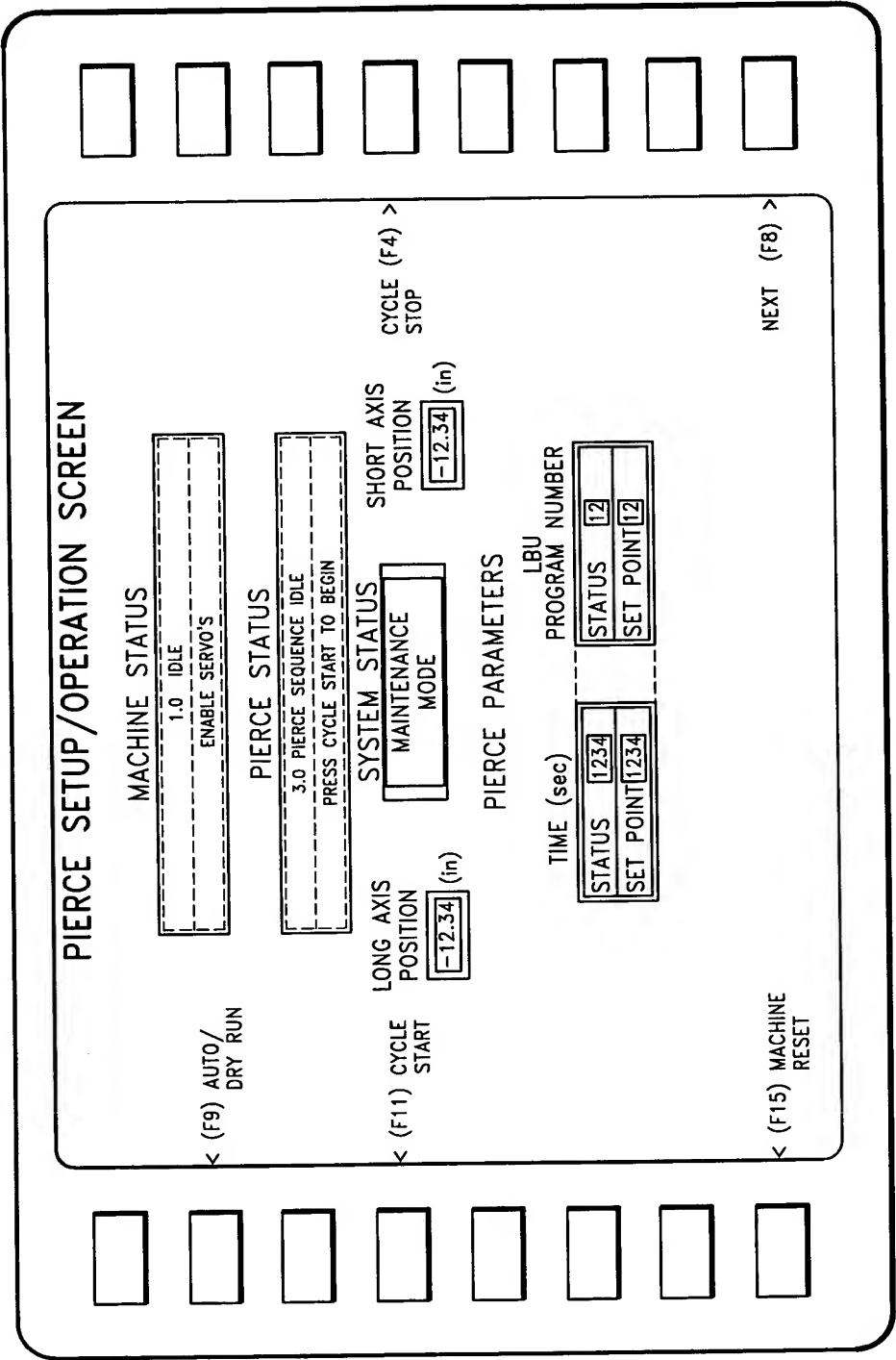


FIG. 17D

CUT SETUP/OPERATION SCREEN

MACHINE STATUS

1.0 IDLE
ENABLE SERVO'S

CUT STATUS

4.0 CUT SEQUENCE IDLE
PRESS CYCLE START TO BEGIN

SYSTEM STATUS

MAINTENANCE
MODE

CUT PARAMETERS

LONG AXIS
POSITION

-12.34 (in)

SHORT AXIS
POSITION

-12.34 (in)

PROGRAM NUMBER

STATUS 12
SET POINT 12

LENGTH (in)

STATUS -12.34
SET POINT -12.34

SPEED (in/min)

STATUS -12.34
SET POINT -12.34

LONG AXIS

STATUS -12.34
SET POINT -12.34

SHORT AXIS

STATUS -12.34
SET POINT -12.34

**LONG AXIS
NOT SELECTED**

**SHORT AXIS
NOT SELECTED**

< (F9) AUTO/
DRY RUN

< (F11) CYCLE
START

< (F13) LONG
AXIS

< (F14) SHORT
AXIS

< (F15) MACHINE
RESET

CYCLE (F4) >
STOP

NEXT (F8) >

FIG. 17E

SURFACE KEYING SETUP/OPERATION SCREEN

MACHINE STATUS

1.0 IDLE
ENABLE SERVO'S

SURFACE KEYING STATUS

5.0 KEYING SEQUENCE IDLE
PRESS CYCLE START TO BEGIN

SYSTEM STATUS

MAINTENANCE
MODE

LONG AXIS POSITION
[-12.34] (in)

SHORT AXIS POSITION
[-12.34] (in)

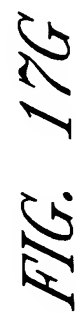
SURFACE KEYING PARAMETERS

PROGRAM NUMBER	SHORT AXIS LENGTH (in)	LONG AXIS LENGTH (in)	OFFSET (in)
STATUS [-12.34] SET POINT [12]	STATUS [-12.34] SET POINT [-12.34]	STATUS [-12.34] SET POINT [-12.34]	STATUS [-12.34] SET POINT [-12.34]
SPEED (in/min)			
STATUS [-12.34] SET POINT [-12.34]	STATUS [-12.34] SET POINT [-12.34]		

< (F9) AUTO/ DRY RUN < (F11) CYCLE START < (F15) MACHINE RESET

CYCLE (F4) > NEXT (F8) >

FIG. 17F



MAINTENANCE SCREEN

WARNING:
OPERATION FROM THIS SCREEN
BYPASSES SYSTEM INTERLOCKS

SYSTEM STATUS

MAINTENANCE MODE

VACUUM CUP 1 ON

VACUUM CUP 2 ON

VACUUM PRESSURE 1

VACUUM PRESSURE 2

LONG AXIS DRIVE DISABLED

SHORT AXIS DRIVE DISABLED

LASER AIR SOLENOID OFF

LASER AIR PRESSURE

LONG AXIS NOT HOMED

SHORT AXIS NOT HOMED

LASER FAULT

JOG SPEED (in/min)

STATUS -12.34

SET POINT -12.34

< (F9) AUTO/ DRY RUN

< (F10) DRIVE ENABLE

< (F11) VACUUM CUPS ON

LONG AXIS

< (F12) HOME

< (F13) FORWARD

(in) -12.34

< (F14) REVERSE

< (F15) MACHINE RESET

ALARMS (F1) >

LASER AIR ON/OFF (F2) >

DRIVE DISABLE (F3) >

VACUUM CUPS OFF (F4) >

SHORT AXIS

HOME (F5) >

FORWARD (F6) >

-12.34 (in)

REVERSE (F7) >

NEXT (F8) >

FIG. 17H

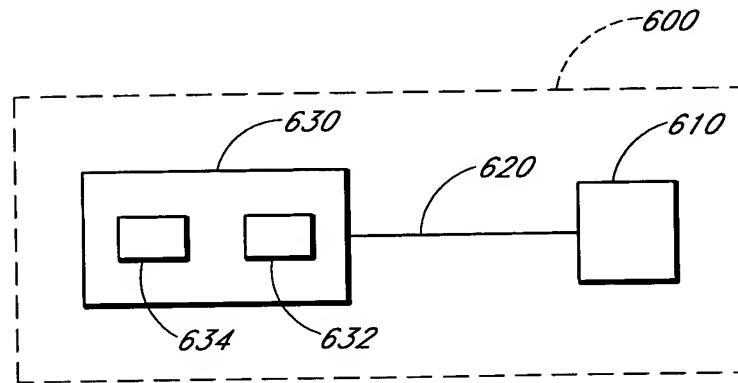


FIG. 18

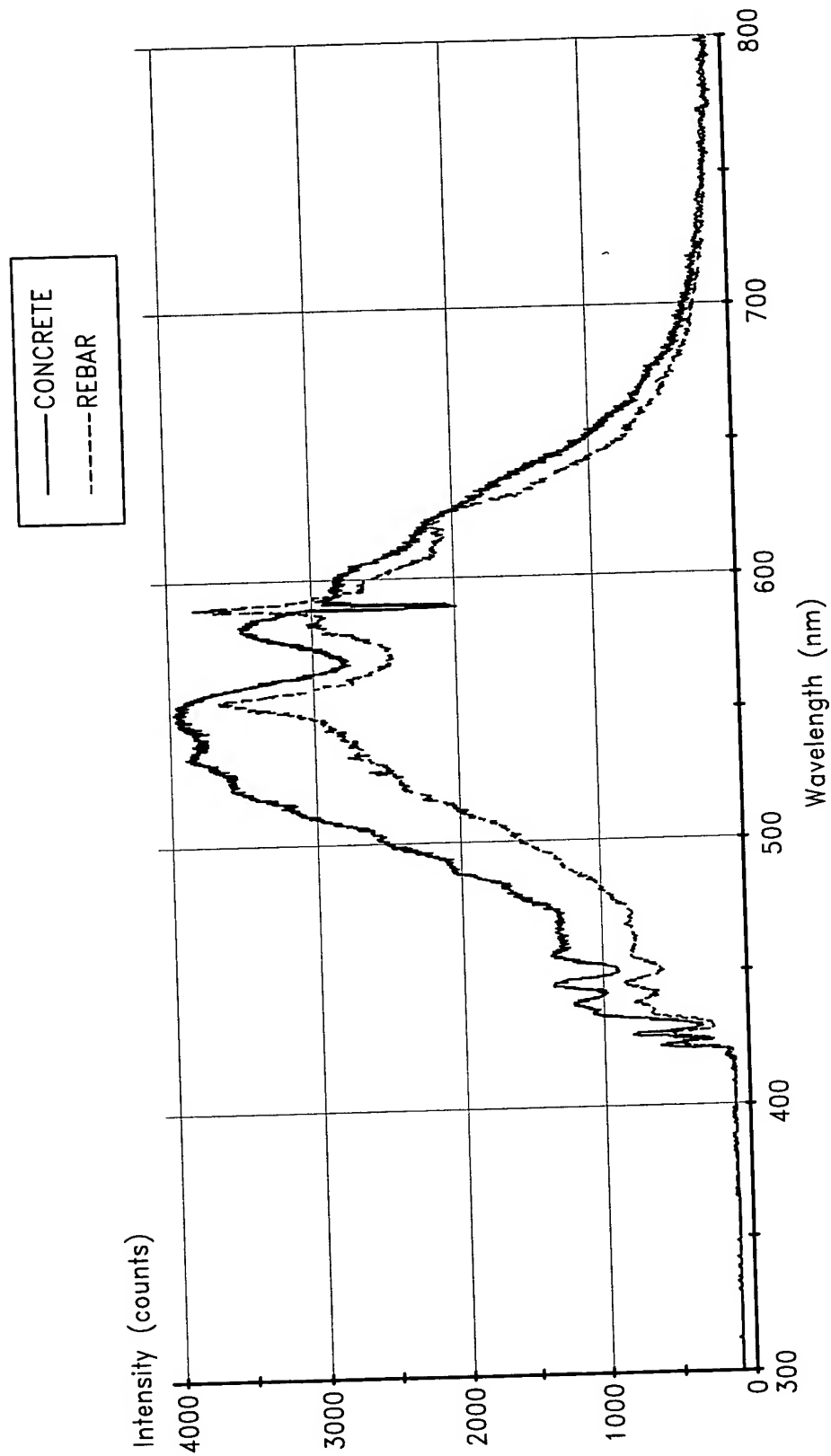


FIG. 19